

IN THE CLAIMS:

Claims 1, 3-10, 12-15 and 16-22 are presently pending.

Listing of the Claims:

1. (currently amended) A genetically transformed plant, comprising:
a means for modulating mitochondrially generated acetyl-CoA and/or respiration rate in the genetically transformed plant as compared to a genomically-unmodified plant of the same genotype wherein the means for modulating mitochondrially generated acetyl-CoA and/or respiration rate is a nucleic acid sequence incorporated into the plant's genome having a sequence selected from the group of sequences consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 and SEQ ID NO:4; and
a promoter operatively linked to the means for ~~reducing plant respiration~~ modulating mitochondrially generated acetyl-CoA and/or respiration rate.
2. (canceled) The genetically transformed plant of claim 1, wherein the means for modulating mitochondrially generated acetyl-CoA and/or respiration rate is a nucleic acid incorporated into the plant's genome having a sequence selected from the group of sequences consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 and SEQ ID NO:4.
3. (currently amended) The genetically transformed plant of claim 1, wherein the plant is selected from the group consisting of borage, Canola, castor, cocoa bean, corn, cotton, *Crambe* spp., *Cuphea* spp., flax, *Lesquerella* and *Limnanthes* spp., Linola, nasturtium, *Oenothera* spp., olive, palm, peanut, rapeseed, safflower, soybean, sunflower, tobacco, *Vernonia* spp., wheat, barley, rice, oat, sorghum, rye, and other members of the *Gramineae*.
4. (original) The genetically transformed plant of claim 3, wherein the plant is Canola.
5. (currently amended) The genetically transformed plant of claim 1, wherein the means for modulating mitochondrially generated acetyl-CoA and/or respiration rate further includes a gene encoding a pyruvate dehydrogenase kinase oriented in an anti-sense direction.

6. (original) The genetically transformed plant of claim 1, wherein the promoter is a ubiquitin gene promoter.

7. (original) The genetically transformed plant of claim 1, wherein the promoter is a phaseolin promoter.

8. (currently amended) A process for modulating mitochondrially generated acetyl-CoA and/or respiration rate in a transgenic plant, the process comprising:
cloning a gene encoding a *Brassica* pyruvate dehydrogenase kinase protein into a vector, wherein the gene comprises a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 and SEQ ID NO:4;
positioning the gene in an anti-sense orientation within the vector; and
transforming a plant with the vector to produce the transgenic plant.

9. (original) The process according to claim 8, further comprising:
linking a promoter to the gene.

10. (original) The process according to claim 9, wherein the promoter is a ubiquitin gene promoter or a phaseolin promoter.

11. (canceled) The process according to claim 8, wherein the gene has a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 and SEQ ID NO:4.

12. (original) The process according to claim 8, wherein the plant is selected from the group consisting of borage, Canola, castor, cocoa bean, corn, cotton, *Crambe* spp., *Cuphea* spp., flax, *Lesquerella* and *Limnanthes* spp., Linola, nasturtium, *Oenothera* spp., olive, palm, peanut, rapeseed, safflower, soybean, sunflower, tobacco, *Vernonia* spp., wheat, barley, rice, oat, sorghum, rye, and other members of the *Gramineae*.

13. (original) The process according to claim 12, wherein the plant is Canola.

14. (original) A transgenic plant obtained by the process according to claim 8.

15. (currently amended) A process for modulating mitochondrially generated acetyl-CoA and/or respiration rate in a transgenic plant, the process comprising:
cloning a gene encoding a *Brassica* pyruvate dehydrogenase kinase protein into a vector, wherein the gene comprises a sequence selected from the group of sequences consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 and SEQ ID NO:4;
transforming the vector into a plant to produce the transgenic plant; and
reducing production of the *Brassica* pyruvate dehydrogenase kinase protein in the transgenic plant;
~~transforming the vector into a plant to produce the transgenic plant.~~

16. (canceled) The process according to claim 15, wherein the gene has a sequence selected from the group of sequences consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 and SEQ ID NO:4.

17. (original) The process according to claim 15, wherein the plant is selected from the group consisting of borage, Canola, castor, cocoa bean, corn, cotton, *Crambe* spp., *Cuphea* spp., flax, *Lesquerella* and *Limnanthes* spp., Linola, nasturtium, *Oenothera* spp., olive, palm, peanut, rapeseed, safflower, soybean, sunflower, tobacco, *Vernonia* spp., wheat, barley, rice, oat, sorghum, rye, and other members of the *Gramineae*.

18. (original) The process according to claim 17, wherein the plant is Canola.

19. (original) The process according to claim 15, wherein the step for reducing production of the *Brassica* pyruvate dehydrogenase kinase protein comprises positioning the gene encoding the *Brassica* pyruvate dehydrogenase kinase protein in an anti-sense orientation in

the vector.

20. (currently amended) A transgenic plant produced by the process according to claim 15.
21. (previously presented) A combination of DNA fragments comprising SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3 and SEQ ID NO:4.
22. (New) A genetically transformed plant, comprising:
 - a means for modulating mitochondrially generated acetyl-CoA and/or respiration rate in the genetically transformed plant as compared to a genomically-unmodified plant of the same genotype wherein the means for modulating mitochondrially generated acetyl-CoA and/or respiration rate is a nucleic acid incorporated into the plant's genome having a sequence of SEQ ID NO:1; and
 - a promoter operatively linked to the means for modulating mitochondrially generated acetyl-CoA and/or respiration rate.